UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
Seattle, WA 98115

Refer to:
2003/00840

August 13, 2003

Mr. Archie W. Judson
United States Economic Development Agency
Jackson Federal Building, Room 1856
915 2nd Avenue
Seattle, WA 98174

Re: Formal Reinitiation of Endangered Species Act Section 7 Consultation and Magnuson-Stevens Act Essential Fish Habitat Consultation for Union Street/I-84 Undercrossing Project, Columbia River, Wasco County, Oregon

Dear Mr. Judson:

Enclosed is a biological opinion (Opinion) prepared by NOAA's National Marine Fisheries Service (NOAA Fisheries) pursuant to section 7 of the Endangered Species Act (ESA) resulting from reinitiation of consultation on the Union Street/I-84 Undercrossing Project (refer to: 2001/01489). This project is beside the Bonneville Pool at approximately River Mile 189.5 of the Columbia River. The Economic Development Agency (EDA) is providing funding to the City of The Dalles to complete the proposed project.

In this Opinion, NOAA Fisheries concludes that funding the proposed action is not likely to jeopardize the continued existence of ESA-listed Upper Columbia River spring-run (UCRS) chinook salmon (*Oncorhynchus tshawytscha*), Upper Columbia River (UCR) steelhead (*O. mykiss*), Middle Columbia River (MCR) steelhead, Snake River fall-run (SRF) chinook salmon, Snake River spring/summer-run (SRS) chinook salmon, Snake River (SR) sockeye salmon (*O. nerka*), and Snake River Basin (SRB) steelhead. Furthermore, the proposed action is not likely to destroy or adversely modify designated critical habitat(s) for SRF chinook salmon, SRS chinook salmon, and SR sockeye salmon. As required by section 7 of the ESA, NOAA Fisheries includes reasonable and prudent measures with nondiscretionary terms and conditions that NOAA Fisheries believes are necessary to minimize the impact of incidental take associated with this action.

This document also serves as consultation on essential fish habitat (EFH) pursuant to section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act and its implementing regulations (50 CFR Part 600). This section of the Columbia River basin is designated as EFH for coho (*O. kisutch*) and chinook salmon.

If you have any questions regarding this letter, please contact Scott Hoefer at 503.231.6938 or Randy Tweten at 541.975.1835, x229 of my staff in the Oregon Habitat Branch.

Sincerely,

for D. Robert Lohn
Regional Administrator

cc: Brian Stahl, The City of The Dalles
Bob Progulske, USFWS
Steve Pribyl, ODFW
Paul Griffin, Congressman Walden's Office
Bonnie Scheeland, CH2M Hill

Endangered Species Act - Section 7 Consultation
Biological Opinion

&

Magnuson-Stevens Fishery Conservation and Management Act
Essential Fish Habitat Consultation

Reinitiation of Consultation of the Union Street/I-84 Undercrossing Project
Columbia River, Wasco County, Oregon

Agency:	Economic Development Administration
Consultation Conducted By:	NOAA's National Marine Fisheries Service, Northwest Region
Date Issued:	August 13, 2003
Issued by:	for _____ D. Robert Lohn Regional Administrator
Refer to:	**2003/00840**

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1. INTRODUCTION

1.1 Background and Consultation History

On June 30, 2003, NOAA's National Marine Fisheries Service (NOAA Fisheries) received a complete biological assessment (BA), essential fish habitat assessment (EFH), and request from the U.S. Economic Development Agency (EDA) for reinitiation of Endangered Species Act (ESA) section 7 formal consultation and EFH consultation for the mitigation proposal on the Union Street/I-84 Undercrossing Project. The EDA is proposing to provide funding to The City of The Dalles for completion of this project, part of which will include implementation of the proposed mitigation project. Based on information received from the EDA, NOAA Fisheries prepared this biological opinion (Opinion). In the June 30, 2003, letter, the EDA determined that Upper Columbia River spring-run (UCRS) chinook salmon (*Oncorhynchus tshawytscha*), Upper Columbia River (UCR) steelhead (*O. mykiss*), Middle Columbia River (MCR) steelhead, Snake River fall-run (SRF) chinook salmon, Snake River spring/summer-run (SRS) chinook salmon, Snake River (SR) sockeye salmon (*O. nerka*), and Snake River Basin (SRB) steelhead, may occur within the project area and that the proposed project is "likely to adversely affect" (LAA) the subject listed species or their designated critical habitat. References and dates identifying ESA listing status, critical habitat designations, and ESA section 4(d) take prohibitions are listed in Table 1.

NOAA Fisheries initially received a letter from the EDA requesting informal consultation on the Union St./I-84 Undercrossing Project on December 31, 2001. However, NOAA Fisheries did not concur with the EDA's determination that the project was "not likely to adversely affect" (NLAA) the subject listed species or their critical habitat, and sent a non-concurrence letter to the EDA on February 4, 2002. Subsequently, NOAA Fisheries staff attended a site visit on May 7, 2002, and participated in several meetings to discuss possible revisions to this project. On July 16, 2002, NOAA Fisheries received a letter from the EDA requesting formal consultation on the proposed funding for the extension of Union Street under Interstate Highway (I-84). On September 9, 2002, NOAA Fisheries issued a biological opinion (refer to: 2001/01489).

On December 18, 2002, NOAA Fisheries received a call from a constituent indicating that the project was not being completed as proposed. On January 9, 2003, NOAA Fisheries staff participated on a site visit with staff from the City of the Dalles, the consultant CH2MHill, the Corps of Engineers (COE), and the Oregon Department of State Lands (DSL). All of the participants on the site visit agreed that the project was not being completed as proposed, as excess vegetation had been removed from a sensitive riparian area and that incidental take occurred that was not authorized in the September 9, 2002 Opinion. On January 10, 2003, staff from The City of the Dalles contacted the EDA and described the current situation and explained that reinitiation of consultation was necessary to develop a mitigation proposal. Further investigation found that inadvertent vegetation clearing removed about 0.087 acres of a vegetated area that was supposed to have been retained according to the September 9, 2002 Opinion. NOAA Fisheries staff worked with the consultant CH2MHill to develop a mitigation

proposal. The EDA formally submitted the mitigation proposal and request for reinitiation of consultation in their letter received June 30, 2003.

NOAA Fisheries prepared this Opinion to address impacts to these species as a result of the mitigation proposal, based on the revisions to the project detailed in the EDA letter of June 30, 2003, and accompanying information. The objective of this Opinion is to determine whether the actions included in the proposed project are likely to jeopardize the continued existence of the above listed species or destroy or adversely modify critical habitat.

Table 1. References for Additional Background on Listing Status, Biological Information, and Critical Habitat Elements for the Listed and Proposed Species Considered in this Opinion.

Species	Listing Status	Critical Habitat	Protective Regulations	Biological Information, Historical Population Trends
Columbia River chum salmon	March 25, 1999; 64 FR 14508, Threatened	NA[1]	July 10, 2000; 65 FR 42422	Johnson *et al.* 1997; Salo 1991
Lower Columbia River steelhead	March 19, 1998; 63 FR 13347, Threatened	NA	July 10, 2000; 65 FR 42422	Busby *et al.* 1995; 1996
Middle Columbia River steelhead	March 25, 1999; 64 FR 14517, Threatened	NA	July 10, 2000; 65 FR 42422	Busby *et al.* 1995; 1996
Upper Columbia River steelhead	August 18, 1997; 62 FR 43937, Endangered	NA	July 10, 2000; 65 FR 42422	Busby *et al.* 1995; 1996
Snake River Basin steelhead	August 18, 1997; 62 FR 43937, Threatened	NA	July 10, 2000; 65 FR 42422	Busby *et al.* 1995; 1996
Snake River sockeye salmon	November 20, 1991; 56 FR 58619, Endangered	December 28, 1993; 58 FR 68543	November 20, 1991; 56 FR 58619	Waples *et al.* 1991a
Lower Columbia River chinook salmon	March 24, 1999; 64 FR 14308, Threatened	NA	July 10, 2000; 65 FR 42422	Myers *et al.*1998; Healey 1991
Upper Columbia River spring-run chinook salmon	March 24, 1999; 64 FR 14308, Endangered	NA	July 10, 2000; 65 FR 42422	Myers *et al.*1998; Healey 1991
Snake River spring/summer-run chinook salmon	April 22, 1992; 57 FR 14653, Threatened	December 28, 1993; 58 FR 68543	April 22, 1992; 57 FR 14653	Matthews and Waples 1991; Healey 1991
Snake River fall-run chinook salmon	April 22, 1992; 57 FR 14653, Threatened	December 28, 1993; 58 FR 68543	April 22, 1992; 57 FR 14653	Waples *et al.* 1991b; Healey 1991

[1] On April 30, 2002, a Federal court vacated the rule designating critical habitat for the LCR chinook salmon, CR chum salmon (*O. keta*), SR steelhead (*O. mykiss*), UCR steelhead, MCR steelhead, and LCR steelhead ESUs considered in this opinion (NMFS 2000).

1.2 Proposed Actions

Proposed actions are defined in NOAA Fisheries' regulations (50 CFR 402.02) as "all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies in the United States or upon the high seas."

The proposed mitigation actions will provide a minimum of 1:1 riparian vegetation replacement, will provide for lost in-water habitat structure near the shoreline, and will compensate for delayed riparian vegetation functions during recovery.

Riparian Plantings

For the 354 square meter area that was inadvertently cleared, the original Vegetation Planting Plan included in the July 16, 2002, BA, and referenced in the September 9, 2002, Opinion, calls for planting 8 black cottonwoods (1.75 in. caliper) and 5 Douglas hawthorns (1 gallon containers), and seeding with common yarrow, arrowleaf balsamroot, and Nutall's larkspur, in addition to permanent native erosion control seeding.

That plan will be augmented as follows:

- Double the planting density of black cottonwoods from 8 to 16.
- Substitute 15 fast-growing quaking aspens for the 5 slow-growing Douglas hawthorns.
- Install 10 Scouler willow (*Salix scouleriana*) seedlings and 10 Douglas' spirea seedlings to facilitate the development of a shrub layer within the vegetation canopy, especially along the shoreline.
- Maximize plantings in planting areas where a relatively deep cover of topsoil exists or can be created; minimize plantings in planting pits within riprapped slopes.
- If possible, plant trees and shrubs nearly horizontal so that they will grow to overhang the aquatic area.
- Install the largest size tree and shrub plant materials that the site can accomodate.
- Add appropriate amount of soil fertilizer and lime to conditioned soil within planting pits and in the hydromulch mix on seeded areas, add only enough fertilizer to achieve natural soil fertility, use a natural tackifier to bind the fertilizer to hydroseeded areas, and apply fertilizer as a one-time application at time of planting.

The grading, irrigation, erosion control, and monitoring plans will be similar to the original plans referred to in the September 9, 2002 Opinion. However, the grading plan will be clarified to include:

- Restore streambanks to a natural slope, pattern, and profile suitable for establishment of permanent woody vegetation, except where existing riprap embankment exists.
- Install LWD along the shoreline to protect the newly constructed soil from wave action.
- Apply at least 1 foot of topsoil cover to planting areas as required by the previous proposal, and apply greater depths of topsoil to finish grades where the slope can accommodate them and where existing riprap embankment is not present. Deeper, more

productive topsoil can be accommodated and will be installed at the western side of the planting area, toward the proposed promenade.

- Use salvaged and stockpiled native topsoil for soil cover, and amend salvaged topsoil with an appropriate amount of composted organic matter to improve soil structure, moisture holding capacity, and fertility.
- Cover topsoil with a natural coir erosion control blanket (*e.g.*, Geocoir®/Dekowe®).

Large Wood Placement

In addition to the large wood (LW) placements described in the September 9, 2002, Opinion, this mitigation proposal will include installing three additional pieces of LW along the shoreline where vegetation was inadvertently cleared. Logs will be delimbed, untreated, at least 25 feet long, and at least 24 inches in diameter 4.5 feet above the butt. The logs will be installed at 0°, 20°, and 30° angles to the shoreline. The LW will be installed by equipment working from the bank, between July 15 and September 1, when the Bonneville Pool is drawn down. One-quarter to one-third of the log diameters will be trenched into the existing sediment for stability, and will be held in place by soil anchors and steel cables, rock, or attached to old pilings that are only exposed at the lowest flows.

Debris Clean-up (asphalt and nearby stream)

These activities will further assist in compensating for the temporary loss of certain habitat functions until the new landscaping matures into the pre-clearing condition, perhaps a 5- to 15-year delay. Two separate activities are included here: (1) Onsite removal of existing asphalt debris along the shoreline and below OHW; and (2) cleanup of debris, non-native materials, and potential fish passage obstructions, including tires, geotextile fabric, plastic sheeting, lumber, pallets, shopping carts, and chainlink fencing in Mill Creek. These activities are detailed in the mitigation proposal received on June 30, 2003.

2. ENDANGERED SPECIES ACT

2.1 Biological Opinion

2.1.1 Evaluating Proposed Actions

The standards for determining jeopardy are set forth in section 7(a)(2) of the ESA as defined by 50 CFR 402.02 (the consultation regulations). In conducting analyses of habitat-altering actions under section 7 of the ESA, NOAA Fisheries uses the consultation regulations combined with the Habitat Approach (NMFS 1999) in the following steps; (1) Consider the status and biological requirements of the species; (2) evaluate the relevance of the environmental baseline in the action area to the species' current status; (3) determine the effects of the proposed or continuing action on the species; (4) consider cumulative effects; and (5) determine whether the proposed action, in light of the above factors, is likely to jeopardize the continued existence of species survival in the wild. In completing this step of the analysis, NOAA Fisheries determines whether the action under consultation, together with all cumulative effects, and added to the

environmental baseline, is likely to jeopardize the ESA-listed species. If the action is likely to jeopardize the species, NOAA Fisheries will identify reasonable and prudent alternatives for the action that would avoid jeopardy.

2.1.1.1 Biological Requirements

The first step in the methods NOAA Fisheries uses for applying the ESA section 7(a)(2) to listed steelhead is to define the species' biological requirements that are most relevant to each consultation. NOAA Fisheries also considers the current status of the listed species, taking into account population size, trends, distribution and genetic diversity. To assess the current status of the listed species, NOAA Fisheries starts with the determinations made in its decision to list MCR steelhead for ESA protection and also considers new data available that is relevant to the determination.

The relevant biological requirements are those necessary for MCR steelhead to survive and recover to naturally-reproducing population levels, at which time protection under the ESA would become unnecessary. Adequate population levels must safeguard the genetic diversity of the listed stock, enhance their capacity to adapt to various environmental conditions, and allow them to become self-sustaining in the natural environment.

For this consultation, the biological requirements are improved habitat characteristics that function to support successful spawning, adult and juvenile migration, and rearing *i.e.*, more complex riparian and shallow-water habitat conditions. The status of these listed species, based upon their risk of extinction, has not significantly improved since the species was listed.

2.1.1.2 Environmental Baseline

For purposes of the Opinion, the action area is defined as the streambed and streambank of the Columbia River, extending one mile upstream and one mile downstream of the project. Except for the excess removal of vegetation (detailed below), the environmental baseline is the same as that described in the September 9, 2002, Opinion.

<u>Decreased Vegetation</u>
Inadvertent vegetation clearing removed about 0.087 acres of a 0.1 acre vegetated area that was to be retained according to the September 9, 2002, Opinion. Clearing resulted from direct mechanical cutting and vegetation damage from sidecast rock. Most of the clearing occurred below 83 feet elevation, the elevation the Corps determined to be the jurisdictional boundary of the Columbia River at Union Street in The Dalles.

The cleared vegetation was about 5 to 7 feet tall, with a few clumps of trees that may have reached about 15 feet tall. Canopy extension over the water (normal pool) was about 4 feet. Shade extended about 8 feet over the water. Most stems of trees and shrubs originated above elevation 77.4 feet, but were inundated on occasion. All of the vegetation was deciduous. The dominant species included silver maple (*Acer saccharinum*), quaking aspen (*Populus*

tremuloides), tree-of-heaven (*Ailanthus altissima*), willow (*Salix sp.*), amorpha (*Amorpha fruticosa*), Himalayan blackberry (*Rubus discolor*), cheat grass (*Bromus tectorum*), and diffuse knapweed (*Centaurea diffusa*).

Affected Ecological Functions

The main ecological functions provided by the vegetation were nutrient delivery, shade, erosion control, streambank stability from root strength, and in-water protection/off-channel habitat from periodically submerged vegetation. The combination of small trees and shrubs growing together provided heterogeneous vegetation structure and stratified canopy layers. Delivery of LW would not have occurred because the species were short-lived and grew on rock substrate, which limited growth potential and promoted early mortality.

The pre-construction riparian vegetation did not function to stabilize slopes. The streambank was artificially created as the structural embankment supporting I-84. It is inherently stable, composed largely of basalt rock and armored with riprap. The Bonneville Pool here acts more like a lake than a stream, so virtually no sheer forces occur that can destabilize the bank. Furthermore, the slopes are short so mass wasting is not a hazard, and surface water runoff is controlled so that overland flow over the slopes did not occur. It is possible that occasional wave action could generate enough energy to dislodge soil particles and fine gravel.

2.1.2 Analysis of Effects

2.1.2.1 Effects of Proposed Action

NOAA Fisheries' jeopardy approach requires evaluation of the effects of proposed actions on listed steelhead within the context of species survival with an adequate potential for recovery under the effects of the proposed action. The action also must restore, maintain, or at least not appreciably interfere with the recovery of the properly functioning condition (PFC) of the various fish habitat within a watershed.

The long-term effects of the proposed mitigation actions will provide a minimum of 1:1 riparian vegetation replacement, will provide for lost in-water habitat structure near the shoreline, and will minimize delayed riparian vegetation functions during recovery. Some short-term adverse effects may be associated with these actions.

Riparian Plantings

The riparian planting plan will be carried out almost entirely below the COE ordinary high water elevation (OHW). Consequently, the proposed plantings and seedlings will be inundated at least once every two years, and vegetation established at the lower slope positions will be inundated more frequently than that. Consequently, the mitigated area will be able to provide submerged vegetation, similar to the pre-construction conditions. This submerged vegetation will provide nutrients, protective cover from prey for juveniles, and low-velocity areas during storm events. Furthermore, the proposed higher-density planting plan will allow other riparian vegetation functions, such as shade, and organic matter input, to recover.

The use of fertilizer in a riparian area may cause an adverse effect to nutrient loading and water quality. However, impacts from the fertilizer will be minimized by using only the amount necessary to achieve natural soil fertility, by using a natural tackifier to bind the fertilizer to hydroseeded areas, and by applying fertilizer only at the time of planting.

Large Wood Placement

The LW placement will assist in providing habitat complexity until submerged vegetation and other in-water habitat structures are fully re-established. The wood will provide an aquatic habitat element that is limiting along the riverfront, and will dissipate wave energy of the Bonneville Pool that otherwise could erode newly restored grades where soil amendments will be added to improve the natural soil productivity.

In the short term, the placement of the LW may temporarily disturb or displace rearing and migrating MCR juvenile steelhead. Furthermore, construction methods and equipment used for LW placement may cause a short-term increase in turbidity and the presence of this equipment creates the potential for water quality degradation other adverse effects:

1. Sedimentation. Salmonids have evolved in systems that periodically experience short-term pulses (days to weeks) of high suspended sediment loads, often associated with flood events, and are adapted to such high pulse exposures. Behavioral effects on fish, such as gill flaring and feeding changes, have been observed in response to pulses of suspended sediment (Berg and Northcote 1985). Adult and larger juvenile salmonids may be little affected by the high concentrations of suspended sediments that occur during storm and snowmelt runoff episodes (Bjornn and Reiser 1991). Newly-emerged salmonid fry may be vulnerable to even moderate amounts of turbidity (Bjornn and Reiser 1991). Also, turbidity, at moderate levels, has the potential to adversely affect primary and secondary productivity (Spence *et al.* 1996). However, because the potential for turbidity should be localized and brief, and the fish present are likely to be adult and large juveniles, the probability of direct and indirect effects due to sedimentation is negligible.

2. Construction-related Chemical Contamination. As with all construction activities, accidental release of fuel, oil, and other contaminants may occur. Operation of the back-hoes, excavators, and other equipment requires the use of fuel, lubricants, *etc.*, which, if spilled into the channel of a waterbody or into the adjacent riparian zone, can injure or kill aquatic organisms. Petroleum-based contaminants (such as fuel, oil, and some hydraulic fluids) contain poly-cyclic aromatic hydrocarbons (PAHs), which can be acutely toxic to salmonids at high levels of exposure and can also cause chronic lethal and acute and chronic sublethal effects to aquatic organisms (Neff 1985). Construction-related effects necessary to complete the proposed action will be minimized, since no mobile construction equipment refueling or maintenance will occur within 300 feet of any waterbody, no large stationary construction equipment will be closer to the Columbia River than the edge of the pavement of I-84, and all refueling areas will have 100% containment.

Debris Clean-up (asphalt and nearby stream)
These activities will further assist in providing for the temporary loss of certain habitat functions until the new landscaping matures into the pre-clearing condition. The removal of in-water asphalt-debris will decrease the adverse effects associated with such debris. According to the BA, in reference to the Material Safety Data Sheet for asphalt, no specific data are available on the ecological toxicity of this product. However, the product may cause mechanical damage to aquatic organisms, and the mineral spirit component is expected to volatilize in the environment and to be moderately toxic to both freshwater and marine organisms. The bioaccumulation potential is unknown. Therefore, removal of the asphalt debris would create additional aquatic habitat and eliminate a potential source of toxicity from the aquatic area. Similarly, the removal of debris, non-native materials, and potential fish passage obstructions from Mill Creek would improve the aquatic habitat in this stream that supports anadromous fish.

2.1.2.2 Cumulative Effects

Cumulative effects are defined in 50 CFR 402.02 as "those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation". Other activities within the watershed have the potential to impact fish and habitat within the action area. A wide variety of actions including ranching, irrigation, and timber harvest occur within the Columbia River basin. Non-federal activities within the watershed are expected to increase. Thus, NOAA Fisheries assumes that future private and state actions will continue within the watershed, but at increasingly higher levels as population density climbs.

2.1.3 Conclusion

After reviewing the current status of MCR steelhead; the environmental baseline for the action area; the effects of the proposed plantings, LW placement, debris removal; and cumulative effects; it is NOAA Fisheries' opinion that this project, as proposed, is not likely to jeopardize the continued existence of these listed species. NOAA Fisheries believes that the proposed action will cause a minor, short-term degradation of anadromous salmonid habitat due to turbidity caused by construction activities and possible decrease in water quality. Direct mortality is not expected, although rearing and migrating juveniles may be temporarily dislocated during LW placement. The completed project will increase the overall amount of riparian vegetation in the project area and improve water quality.

2.1.4 Conservation Recommendations

Conservation recommendations are defined as "discretionary measures to minimize or avoid adverse effects of a proposed action on listed species or critical habitat or regarding the development of information" (50 CFR 402.02). Section 7 (a)(1) of the ESA directs Federal agencies to use their authorities to further the purposes of the ESA by carrying out conservation

programs for the benefit of the threatened and endangered species. NOAA Fisheries has no additional conservation recommendations regarding the action addressed in this Opinion.

2.1.5 Reinitiation of Consultation

As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained or is authorized by law and if; (1) The amount or extent of taking specified in the Incidental Take Statement is exceeded; (2) new information reveals effects of the agency action that may affect listed species in a manner or to an extent not considered in this Opinion; (3) the action is modified in a way that causes an effect on listed species that was not previously considered; or (4) a new species is listed or critical habitat is designated that may be affected by the action. In instances where the amount or extent of authorized incidental take is exceeded, any operations causing such take must cease pending conclusion of the reinitiated consultation.

2.2 Incidental Take Statement

The ESA at section 9 [16 USC 1538] prohibits take of endangered species. The prohibition of take is extended to threatened anadromous salmonids by section 4(d) rule [50 CFR 223.203]. Take is defined by the statute as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." [16 USC 1532(19)] Harm is defined by regulation as "an act which actually kills or injures fish or wildlife. Such an act may include significant habitat modification or degradation which actually kills or injures fish or wildlife by significantly impairing essential behavior patterns, including, breeding, spawning, rearing, migrating, feeding or sheltering." [50 CFR 222.102] Harass is defined as "an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering." [50 CFR 17.3] Incidental take is defined as "takings that result from, but are not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or applicant." [50 CFR 402.02] The ESA at section 7(o)(2) removes the prohibition from any incidental taking that is in compliance with the terms and conditions specified in a section 7(b)(4) incidental take statement [16 USC 1536].

An incidental take statement specifies the impact of any incidental taking of endangered or threatened species. It also provides reasonable and prudent measures that are necessary to minimize impacts and sets forth terms and conditions with which the action agency must comply to implement the reasonable and prudent measures.

2.2.1 Amount and Extent of the Take

NOAA Fisheries anticipates that the action covered by this Opinion is reasonably certain to result in incidental take of listed salmonids because of detrimental effects from turbidity caused by construction activities and possible short-term decrease in water quality. Effects of actions such as the one covered by this Opinion are largely unquantifiable in the short term, and are not

expected to be measurable as long-term effects on habitat or population levels. Therefore, even though NOAA Fisheries expects some low level incidental take to occur due to the action covered by this Opinion, the best scientific and commercial data available are not sufficient to enable NOAA Fisheries to estimate a specific amount of incidental take to the species itself. In instances such as these, NOAA Fisheries designates the expected level of take as "unquantifiable".

Based on the information provided by the EDA and other available information, NOAA Fisheries anticipates that an unquantifiable amount of incidental take could occur as a result of the action covered by this Opinion. The extent of the take is limited to the action area, which is defined as the streambed and streambank of the Columbia River, extending one mile upstream and one mile downstream of the project.

2.2.2 Reasonable and Prudent Measures

1. Minimize the likelihood of incidental take from in-water work associated with LW placement by following best management practices for LW placement and by timing the completion of all in-water work as necessary to avoid harming vulnerable salmon life stages, including spawning, migration, and rearing.

2. Minimize the amount and extent of incidental take from construction activities in or near the water by implementing effective erosion and pollution control measures, minimizing the movement of soils and sediment both into and within the stream, and stabilizing bare soil in the short and long term.

3. Complete a comprehensive monitoring and reporting program to ensure measures provided in this Opinion are effective in minimizing the likelihood of take from permitted activities.

2.2.3 Terms and Conditions

To be exempt from the prohibitions of section 9 of the ESA, the EDA and/or their contractors must comply with the terms and conditions as described in the September 9, 2002 Opinion, which implement the reasonable and prudent measures described above, with the exception of the amendment of Term and Condition 1. b. In-water work timing as described below. These terms and conditions are non-discretionary.

Term and Condition 1. b. as it appears in the September 9, 2002 Opinion:

1. To implement reasonable and prudent measure #1 (in-water work), the EDA shall ensure that:

    b. In-water work timing. All work within the active channel of all anadromous fish-bearing streams, or in systems which could potentially contribute sediment or

toxicants to downstream fish-bearing systems, will be completed within the ODFW in-water work period of November 15 to March 15 (ODFW 2000).

i. Work period extensions. Extensions of the in-water work period, including those for work outside the wetted perimeter of the stream but below the ordinary high water mark, must be approved by biologists from NOAA Fisheries.

Amended Term and Condition 1. b. to replace Term and Condition 1. b. from the September 9, 2002 Opinion:

1. To implement reasonable and prudent measure #1 (in-water work), the EDA shall ensure that:

   b. In-water work timing. All work within the water of all anadromous fish-bearing streams, or in water of systems which could potentially contribute sediment or toxicants to downstream fish-bearing systems, will be completed between July 15 and September 1. Work in the dry, but below the ordinary high water mark may occur between July 15 and November 15. This period is outside the ODFW in-water work period of November 15 to March 15 (ODFW 2000). The rationale for this change in dates is that it allows the majority of work to be done in the dry due to low flows, instead of much of the work being in-water during the normal work window. In addition, the in-water work will all be in shallow, near-shore habitat after the majority of juvenile listed species have outmigrated, and while listed migrating adults are in deeper water. Any extensions of the in-water work period, including those for work outside the wetted perimeter of the stream but below the ordinary high water mark, must be approved by biologists from NOAA Fisheries.

3. MAGNUSON-STEVENS ACT

3.1 Background

The objective of the essential fish habitat (EFH) consultation is to determine whether the proposed action may adversely affect designated EFH for relevant species, and to recommend conservation measures to avoid, minimize, or otherwise offset potential adverse effects to EFH resulting from the proposed action.

3.2 Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-297), requires the inclusion of EFH descriptions in Federal fishery management plans. In addition, the MSA requires Federal agencies to consult with NOAA Fisheries on activities that may adversely affect EFH.

EFH means those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (MSA §3). For the purpose of interpreting the definition of EFH: "Waters" include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate; "substrate" includes sediment, hard bottom, structures underlying the waters, and associated biological communities; "necessary" means the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem; and "spawning, breeding, feeding, or growth to maturity" covers a species' full life cycle (50CFR600.110).

Section 305(b) of the MSA (16 U.S.C. 1855(b)) requires that:

- Federal agencies must consult with NOAA Fisheries on all actions, or proposed actions, authorized, funded, or undertaken by the agency, that may adversely affect EFH.

- NOAA Fisheries shall provide conservation recommendations for any Federal or state activity that may adversely affect EFH.

- Federal agencies shall within 30 days after receiving conservation recommendations from NOAA Fisheries provide a detailed response in writing to NOAA Fisheries regarding the conservation recommendations. The response shall include a description of measures proposed by the agency for avoiding, mitigating, or offsetting the impact of the activity on EFH. In the case of a response that is inconsistent with the conservation recommendations of NOAA Fisheries, the Federal agency shall explain its reasons for not following the recommendations.

The MSA requires consultation for all actions that may adversely affect EFH, and does not distinguish between actions within EFH and actions outside EFH. Any reasonable attempt to encourage the conservation of EFH must take into account actions that occur outside EFH, such as upstream and upslope activities, that may have an adverse effect on EFH. Therefore, EFH consultation with NOAA Fisheries is required by Federal agencies undertaking, permitting or funding activities that may adversely affect EFH, regardless of its location.

3.3 Identification of EFH

The Pacific Fisheries Management Council (PFMC) has designated EFH for three species of Pacific salmon: Chinook (*Oncorhynchus tshawytscha*), coho (*O. kisutch*), and Puget Sound pink salmon (*O. gorbuscha*) (PFMC 1999). Freshwater EFH for Pacific salmon includes all those streams, lakes, ponds, wetlands, and other waterbodies currently, or historically accessible to salmon in Washington, Oregon, Idaho, and California, except areas upstream of certain impassable man-made barriers (as identified by the PFMC), and longstanding, naturally-impassable barriers (*i.e.*, natural waterfalls in existence for several hundred years). Detailed descriptions and identifications of EFH for salmon are found in Appendix A to Amendment 14 to the *Pacific Coast Salmon Plan* (PFMC 1999). Assessment of potential adverse effects to these species' EFH from the proposed action is based on this information.

3.4 Proposed Actions

The proposed actions are detailed above in section 1.2. The action area is defined as the streambed and riparian habitat of the Columbia River extending one mile upstream and one mile downstream of the project disturbance limits. This area has been designated as EFH for various life stages of chinook and coho salmon.

3.5 Effects of Proposed Action

As described in detail in section 2.1.3, the proposed activities may result in detrimental short- and long-term adverse effects to a variety of habitat parameters. These impacts include increases in turbidity, disturbance to the beds and bank of the river, removal of riparian vegetation, and the potential for pollutants to enter the water.

3.6 Conclusion

NOAA Fisheries believes that the proposed action will adversely affect the EFH for chinook salmon.

3.7 EFH Conservation Recommendations

Pursuant to section 305(b)(4)(A) of the MSA, NOAA Fisheries is required to provide EFH conservation recommendations for any Federal or state agency action that would adversely affect EFH. The conservation measures proposed for the project by the ONF and all of the reasonable and prudent measures and the terms and conditions contained in sections 2.2.3 and 2.2.4 (respectively), are applicable to salmon EFH. Therefore, NOAA Fisheries incorporates each of those measures here as EFH conservation recommendations.

3.8 Statutory Response Requirement

Please note that the MSA (section 305(b)) and 50 CFR 600.920(j) requires the Federal agency to provide a written response to NOAA Fisheries after receiving EFH conservation recommendations within 30 days of its receipt of this letter. This response must include a description of measures proposed by the agency to avoid, minimize, mitigate or offset the adverse impacts of the activity on EFH. If the response is inconsistent with a conservation recommendation from NOAA Fisheries, the agency must explain its reasons for not following the recommendation.

3.9 Supplemental Consultation

The EDA must reinitiate EFH consultation with NOAA Fisheries if either action is substantially revised or new information becomes available that affects the basis for NOAA Fisheries' EFH conservation recommendations (50 CFR 600.920).

4. LITERATURE CITED

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